UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,345	04/15/2004	**Shannon V. Davidson**	064747.1011	8660

5073 7590 04/15/2011

BAKER BOTTS L.L.P.
2001 ROSS AVENUE
SUITE 600
DALLAS, TX 75201-2980

EXAMINER	
DAFTUAR, SAKET K	
ART UNIT	**PAPER NUMBER**
2451	

NOTIFICATION DATE	DELIVERY MODE
04/15/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptomail1@bakerbotts.com
glenda.orrantia@bakerbotts.com

Office Action Summary	Application No.	Applicant(s)	
	10/825,345	DAVIDSON ET AL.	
	Examiner	Art Unit	
	SAKET K. DAFTUAR	2451	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 January 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/25/2010--03/14/2011*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Amendment

1. This office action is responsive to the amendment filed on January 27th, 2011. Claims 1-45 are presented for the examination.

Response to Arguments

2. Applicant's arguments filed January 27th, 2011 have been fully considered but they are not persuasive. As per argument filed, applicant argues to the substance that:

a. Brownell-Marsh-Lortz combination fails to disclose teach or suggest resetting a boot image of the selected noted based at least in part on the retrieved policy, the boot image being compatible with the distributed application, and associating a virtual disk image with the selected node based at least in part on the retrieved policy. Applicant also argues that Brownell-Marsh-Lortz combinations are improper and requested for evidentiary support.

In response to applicant arguments a), examiner would like to point out that Brownell is directed to " a processing platform from which virtual systems may be deployed through configuration commands. The platform provides a large pool of processors from which a subset may be selected and configured through software commands to form a virtualized network of computers ("processing area network" or "processor clusters") that may be deployed to serve a given set of applications or customer " (see column 2, lines 45-52). In another words, Brownell is directed to processing systems having virtualized communication

networks and storage for quick deployment and reconfiguration in which virtual processing area networks are configured and deployed.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). As such examiner considers the following reconstruction where Brownell discloses "Each control node 120 is a single board that includes one or more (e.g., 4) processors, local memory, and local disk storage for holding **independent copies of the boot image and initial file system that is used to boot operating system software for the processing nodes** 105 and for the control nodes 106."

Examiner considers "boot image" is a type of disk image or a computer file containing the complete contents and structure of a computer storage media.(see Boot-image, Wikipedia, http://en.wikipedia.org/wiki/Boot_image). Brownell also discloses deploying to serve a given set of applications, having a node whereas each node is associated with boot image and initial file system that is used to boot operating system software for the processing nodes.

As Brownell is directed to reconfiguration of communication system and deployment, Brownell is processing "boot image" to boot operating system for the processing nodes.

However, Brownell is silent about resetting a boot image [examiner interprets resetting boot image as configuring or re-configuring the boot file or registry file or editing the boot image or file] of the selected node based at least in part on the retrieved policy whereas the boot image is being compatible with the distributed application.

Marsh teaches a mechanism that reconfigure, reset, or edit boot image. As specification fails to define "reset" whether or not reset boot image is being reset to its original image and by giving the broadest reasonable interpretation to claim language, examiner considers Marsh teaches resetting a boot image based on criteria to update the firmware patch by performing firmware upgrade and verifying the firmware version.

> "Improved Method for Implementing Firmware Upgrades
> Having described a typical boot process with regard to the manipulation and processing of the various items comprising an exemplary boot image 400 with regard to FIG. 2, reference is now directed to FIG. 3, **which presents a modified boot image in accordance with the present invention**. As illustrated in FIG. 3, **the memory 300 may comprise a modified boot image 480 that may be stored on the fixed data storage device 310. The modified boot image 480 may comprise a system loader 410, a system loader configuration file 420, and a firmware patch 500 in accordance with the present invention**.
> In a preferred embodiment, **the system loader configuration file 420 of the modified boot image 480 may be configured to direct the system loader 410 to execute the firmware patch 500 upon the next boot request.** The firmware patch 500 differs from prior art software patches, such as the exemplary typical software patch 440 (FIG. 2) for at least the reason that prior art software patches are reliant upon the current

command infrastructure as defined by the present firmware version and operating system. The firmware patch 500 is unique in that it contains the execution code necessary to perform a firmware upgrade. Specifically, the firmware patch 500 contains a bootable kernel, firmware update logic, and a non-volatile memory interface. The bootable kernel may further comprise a system loader interface and reboot logic.

The firmware patch 500 permits a system administrator to distribute a firmware upgrade to a class of machines via a network. In addition, the firmware patch 500 permits a system administrator to "push" the firmware update to a plurality of network connected computer systems simultaneously. Furthermore, the firmware patch 500 can be bundled along with other software patches that may rely on the firmware update. Once the firmware patch 500 has upgraded the firmware 335 within each respective computer system 100 (FIG. 1), **the associated executable application may be configured to modify the boot image 480 such that the computer system 100 is programmed to boot in the new firmware/operating system environment rather than repeatedly applying the firmware patch 500 upon each power-up or computer system boot**.

Reference is now directed to FIG. 4, which presents a schematic diagram illustrating the various elements comprising the firmware patch 500 of FIG. 3. In this regard, the firmware patch 500 may comprise a patch memory map 550 that may contain all the necessary function code and data to perform the designated firmware upgrade. As illustrated in FIG. 4, the patch memory map 550 may comprise a firmware revision 552, an install application 554, and a flash application 556. As also illustrated in FIG. 4, the flash application 556 may comprise a bootable kernel 560, which may further comprise a system loader interface 562 and a reboot logic 564. **The bootable kernel 560, the system loader interface 562, and the reboot logic 564 may be compatible with the underlying firmware presently stored within the nonvolatile memory 330 (FIG. 3) on the computer system 100 (FIG. 1).**

In a preferred embodiment, the install application 554 may be configured **to load the bootable kernel 560, the system loader interface 562, and the reboot logic 564 from the flash application 556 on the fixed data storage device 310 or "boot" disk.** As previously described, **the modified boot image 480 (FIG. 3) may comprise the firmware patch 500, which may comprise the modified memory map 550. The install application 554 may also be configured to direct the system loader 410 to load the firmware patch 500 and guide the computer 110 (FIG. 1) through the firmware upgrade boot process.** Once the computer 110 is operative in a mode that is compatible with the presently installed firmware 335, the flash application 556 may verify that the presently installed firmware 335 is indeed a version that is designated

for the firmware upgrade. If it is determined that the present firmware version is suited for the upgrade, the flash application 556 may be configured to replace the contents of the non-volatile memory device 330 with the firmware revision 552. Next, the install application 554 may include code necessary to apply an upgraded operating system, software patches, and **other application programs compatible with the new firmware** (i.e., the firmware revision 552). **Last, the install application 554 may include code to load a suitable boot image for the new command environment. This may include the necessary instruction for directing subsequent boot processes to the boot image for the new command environment and for removing the firmware revision 552 and the flash application 556 from the boot disk**."

Figure 6 of Marsh teaches resetting a boot image based on firmware upgrade by verifying the firmware version and based on firmware update logic, see column 9, lines 33-56 below:

"Having briefly described a network environment 6OO (FIG. 5), which may support remote application of the firmware patch 500, reference is now directed to FIG. 6, which illustrates a method for delivering and installing firmware upgrades that may be practiced via a workstation coupled to the network of FIG. 5. As illustrated in FIG. 6, a method for performing firmware upgrades 700 may begin with step 705, herein labeled, "Start." Next, as indicated in step 710, the method for performing **firmware upgrades** 700 **may deliver a firmware install patch to a boot disk on each workstation 100 (FIG. 1) that is designated to receive the firmware upgrade**. Once the firmware install patch has been stored on the boot disk within a workstation 100 (FIG. 1), the install application 554 (FIG. 4) may be initiated as shown in step 715. **The method for performing firmware upgrades 700 may continue by performing a verification of the firmware version presently operative on the respective workstation 100, as indicated in the query of step 720**. If the determination in step 720 is negative, the method for performing firmware upgrades 700 may be configured to notify an operator that the presently installed firmware is incompatible with the intended firmware upgrade as shown in step 725. Having notified the operator, the method may proceed to terminate, as indicated by the flowchart of FIG. 6.

Otherwise, if the determination in step 720 is affirmative, the method for performing firmware upgrades may continue by performing step 730 where the system loader 410 (FIG. 3) may be configured to

> select the flash application 556 (FIG. 4) upon the next boot of the computer system 100 (FIG. 1). Next, the install application 554 (FIG. 4) may trigger a boot of the microprocessor 112 (FIG. 1) as indicated in step 735. With the flash application 556 (FIG. 4) designated in the modified boot image 550 (FIG. 4), the method for performing a firmware upgrade 700 may proceed by executing the flash application 556 (FIG. 4) as shown in step 740. With the computer system appropriately configured to allow the microprocessor 112 (FIG. 1) to install the firmware upgrade into the non-volatile memory device 330 without compromising the operating system, the method may now use **the firmware update logic 570** and the non-volatile memory interface 580 from the flash application 556 (FIG. 4) to load the new firmware as shown in step 745. As illustrated in step 750, the method for performing firmware upgrades may use the flash application 556 (FIG. 4) to select the operating system 434 (FIG. 2) upon the next boot of the computer system 100 (FIG. 1).
>
> Having installed the firmware revision 552 (FIG. 4) in the non-volatile memory device 330 of the computer system 100 (FIG. 1) in step 745, and **reset the system loader configuration file 420 (FIG. 2) to select the operating system kernel for transfer into RAM 320 (FIGS. 1 3), the install application 554 (FIG. 4) may be configured to boot the microprocessor as indicated in step 755. As further illustrated in step 760 of the flowchart of FIG. 6, the method for performing firmware upgrades 700 may be configured to pause while the newly installed firmware revision 552 (FIG. 4) executes and the reconfigured system loader 410 transfers the operating system kernel into RAM 320 (FIGS. 1 3).** Once the boot process has completed, **the method for performing firmware upgrades 700 may be configured to clean up the file system by removing the flash application 556 and the firmware revision 552 from the on the fixed storage data device 310 (FIG. 1),** as illustrated in step 765. The method for performing firmware upgrades 700 may then terminate as indicated in step 770 herein labeled, "End."
>
> It is clear from the above citation that Marsh teaches resetting a boot image by performing firmware upgrade based on firmware version, i.e. re-configuring the boot image in modified form whereas the modified boot image includes software firmware patch compatible with the application needed to be installed in next boot request. Upon installing such application, it is clear that new modified boot image has been loaded and evidenced by removing the previous firmware version.

Brownell in view of Marsh discloses processing, deploying boot image and modifying the boot image to process the compatible application by installing the compatible software application.

However, Marsh in view of Brownell is silent about policy being associated **when configuring the network communication system**.

Lortz teaches that policy [policy or policies in client computer are compared, retrieved, and updated from policy server] **associated when configuring the network communication system** (see figures 6-7B, column 3, line 50 - column 5, line 45 for configuring the client system based on retrieved policy from server).

Thus, it would have been recognized by one of ordinary skill in the art that applying the known technique of configuring the network system based on the policy taught by Lortz and modifying the boot image or reconfiguring the boot image as taught by Marsh into the network node or network devices of Brownell would have yielded predicable results and resulted in an improved network system, namely, a improved network cluster system that would positively and efficiently updating the configuration of network system devices based on policy in network cluster system of Brownell to efficiently managing and distributing the network policies in all network cluster system devices and efficiently configures the network cluster system devices or computers by transmitting configuration data from the policy files or database or policy server.

Claim Rejections - 35 USC § 101

3. Claims 16-30 rejected under 35 U.S.C. 101 in previous office action have been withdrawn in view of claim amendment as filed on January 27th, 2011.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brownell et al. US Patent Number 7,231,430 B2 (hereinafter Brownell) and Marsh et al. US Patent Number 7,055,148 B2 (hereinafter Marsh) and further in view of Lortz et al. US Patent Number 7,428,583 B1 (hereinafter Lortz).

As per claim 1, Brownell discloses selecting a distributed application (see column 2, lines 47-62); dynamically selecting one of a plurality of nodes(see column 2, line 47- column 3, line 8); associating a virtual disk image with the

selected node based (see column 2, line 47- column 3, line 26); and executing at least a portion of the distributed application on the selected node using the virtual disk image associated with the selected node (see column 2, line 47- column 3, line 26) the execution performed by at least one processor of the selected node (see figure1, column 2, line 45 – column 3, line 67, column 5, line 45 – column 6, line 38).

However, Brownell is silent about resetting a boot image [read as configuring or re-configuring the boot file or registry file] of the selected node based at least in part on the retrieved policy and making the boot image being compatible with the distributed application.

Marsh teaches resetting a boot image [read as configuring the boot file or registry file or configuration file or boot image with software patch, see column 10, lines 12-30 for re-configuring or reset the system loader configuration files] of the selected node, the boot image [boot image with firmware software patch] being compatible with the distributed application (see column 2, line 57 – column 3, line 48, column 6, line 15 – column 8, line 13, column 8, line 39 – column 10, line 30, see figures 2-4, 6).

However, Marsh in view of Brownell is silent about policy being associated when configuring the network communication system.

Lortz teaches that policy [policy or policies in client computer are compared, retrieved, and updated from policy server] associated when configuring the network communication system (see figures 6-7B, column 3, line

50 - column 5, line 45 for configuring the client system based on retrieved policy from server).

Thus, it would have been recognized by one of ordinary skill in the art that applying the known technique of configuring the network system based on the policy taught by Lortz and modifying the boot image or reconfiguring the boot image as taught by Marsh into the network node or network devices of Brownell would have yielded predicable results and resulted in an improved network system, namely, a improved network cluster system that would positively and efficiently updating the configuration of network system devices based on policy in network cluster system of Brownell to efficiently managing and distributing the network policies in all network cluster system devices and efficiently configures the network cluster system devices or computers by transmitting configuration data from the policy files or database or policy server.

As per claim 2, Brownell in view of Marsh and Lortz discloses a method as set forth above in claim 1.

However Brownell in view of Lortz is silent about selecting one of a plurality of compatible boot images.

Marsh teaches selecting one of a plurality of compatible boot images [boot image with software patch] based on the comparison(see column 2, line 57 – column 3, line 48 for modifying boot image, column 6, line 15 – column 8, line 13 boot image with particular software firmware patch defined by the firmware

version and operating system, column 8, line 39 – column 10, line 30, see figures 2-4, 6).

Thus, it would have been recognized by one of ordinary skill in the art that applying the known technique of configuring the network system based on the policy taught by Lortz and modifying the boot image or reconfiguring the boot image as taught by Marsh into the network node or network devices of Brownell would have yielded predicable results and resulted in an improved network system, namely, a improved network cluster system that would positively and efficiently updating the configuration of network system devices based on policy in network cluster system of Brownell to efficiently managing and distributing the network policies in all network cluster system devices and efficiently configures the network cluster system devices or computers by transmitting configuration data from the policy files or database or policy server.

As per claim 3, Brownell in view of Marsh and Lortz discloses a method in claims 1 and 2, as set forth above. In addition, Brownell discloses determining a count of nodes in the subset (see column 2, line 47- column 3, line 26, column 8, lines 34-51, column 14, lines 39-49).

However Brownell is silent about selecting the boot image based on a link in the policy and comparing with the retrieved policy

Marsh teaches selecting the boot image based on a link in the policy (see column 2, line 57 – column 3, line 48, column 6, line 15 – column 8, line 13, column 8, line 39 – column 10, line 30, see figures 2-4, 6).

Lortz teaches comparing with the retrieved policy (see figures 6-7B, column 3, line 50 - column 5, line 45 for configuring the client system based on retrieved policy from server).

Thus, it would have been recognized by one of ordinary skill in the art that applying the known technique of configuring the network system based on the policy taught by Lortz and modifying the boot image or reconfiguring the boot image as taught by Marsh into the network node or network devices of Brownell would have yielded predicable results and resulted in an improved network system, namely, a improved network cluster system that would positively and efficiently updating the configuration of network system devices based on policy in network cluster system of Brownell to efficiently managing and distributing the network policies in all network cluster system devices and efficiently configures the network cluster system devices or computers by transmitting configuration data from the policy files or database or policy server.

As per claim 4, Brownell in view of Marsh and Lortz discloses a method in claims 1 and 2, as set forth above.

Brownell in view of Lortz is silent about one of the plurality of compatible boot images.

Marsh teaches node associated with one of the plurality of compatible boot images (see column 2, line 57 – column 3, line 48, column 6, line 15 – column 8, line 13, column 8, line 39 – column 10, line 30, see figures 2-4, 6).

Thus, it would have been recognized by one of ordinary skill in the art that applying the known technique of configuring the network system based on the policy taught by Lortz and modifying the boot image or reconfiguring the boot image as taught by Marsh into the network node or network devices of Brownell would have yielded predicable results and resulted in an improved network system, namely, a improved network cluster system that would positively and efficiently updating the configuration of network system devices based on policy in network cluster system of Brownell to efficiently managing and distributing the network policies in all network cluster system devices and efficiently configures the network cluster system devices or computers by transmitting configuration data from the policy files or database or policy server.

As per claim 5, Brownell discloses determining if one or more of the plurality of nodes is unutilized by a second distributed application (see column 7, line 29 – column 8, line 51; internal nodes utilization is unavailable to external node); and in response to at least one of the nodes being unutilized, selecting one of the unutilized nodes (see column 7, line 29 – column 8, line 51).

As per claim 6, Brownell in view of Marsh and Lortz discloses a method in claims 1 and 5, as set forth above. In addition, Brownell discloses compatibility of the selected node with the selected distributed application (see column 7, line 29 – column 8, line 51).

Thus, it would have been recognized by one of ordinary skill in the art that applying the known technique of configuring the network system based on the policy taught by Lortz and modifying the boot image or reconfiguring the boot image as taught by Marsh into the network node or network devices of Brownell would have yielded predicable results and resulted in an improved network system, namely, a improved network cluster system that would positively and efficiently updating the configuration of network system devices based on policy in network cluster system of Brownell to efficiently managing and distributing the network policies in all network cluster system devices and efficiently configures the network cluster system devices or computers by transmitting configuration data from the policy files or database or policy server.

As per claim 7, Brownell in view of Marsh and Lortz discloses a method in claim 6, as set forth above.

Brownell in view of Lortz is silent about shutting down the selected node; resetting the boot image of the selected node; and restarting the selected node using the reset boot image.

Marsh teaches automatically shutting down the selected node (see column 2, line 57 – column 3, line 48, column 6, line 15 – column 8, line 13, column 8, line 39 – column 10, line 30, see figures 2-4, 6); resetting the boot image of the selected node (see column 2, line 57 – column 3, line 48, column 6, line 15 – column 8, line 13, column 8, line 39 – column 10, line 30, see figures 2-

4, 6);and restarting the selected node using the reset boot image (see column 2, line 57 – column 3, line 48, column 6, line 15 – column 8, line 13, column 8, line 39 – column 10, line 30, see figures 2-4, 6).

Thus, it would have been recognized by one of ordinary skill in the art that applying the known technique of configuring the network system based on the policy taught by Lortz and modifying the boot image or reconfiguring the boot image as taught by Marsh into the network node or network devices of Brownell would have yielded predicable results and resulted in an improved network system, namely, a improved network cluster system that would positively and efficiently updating the configuration of network system devices based on policy in network cluster system of Brownell to efficiently managing and distributing the network policies in all network cluster system devices and efficiently configures the network cluster system devices or computers by transmitting configuration data from the policy files or database or policy server.

As per claim 8, Brownell discloses terminating any processes associated with the second distributed application prior to shutting down the node (see column 2, line 47- column 3, line 26, column 6, lines 18-35, column 9, line 54 – column 10,line 28, failure is being detected, before hand, based on the heartbeat messaging mechanism).

As per claim 9, Brownell in view of Marsh and Lortz discloses a method in claim 1, as set forth above.

Brownell in view of Lortz is silent about a plurality of links to boot images, each link associated compatible with the distributed application.

Marsh teaches a plurality of links to boot images [firmware version of boot image], each link associated compatible with the distributed application (see column 2, line 57 – column 3, line 48, column 6, line 15 – column 8, line 13, column 8, line 39 – column 10, line 30, see figures 2-4, 6).

Thus, it would have been recognized by one of ordinary skill in the art that applying the known technique of configuring the network system based on the policy taught by Lortz and modifying the boot image or reconfiguring the boot image as taught by Marsh into the network node or network devices of Brownell would have yielded predicable results and resulted in an improved network system, namely, a improved network cluster system that would positively and efficiently updating the configuration of network system devices based on policy in network cluster system of Brownell to efficiently managing and distributing the network policies in all network cluster system devices and efficiently configures the network cluster system devices or computers by transmitting configuration data from the policy files or database or policy server.

As per claim 10, Brownell discloses one or more parameters for determining the timing of the selection of the node (column 27, lines 30-32).

As per claim 11, Brownell discloses a remote boot image stored in a Storage Area Network (SAN) (column 2, line 45 – column 3, line 26).

As per claim 12, Brownell in view of Marsh and Lortz discloses a method in claim 1, as set forth above.

Brownell in view of Lortz is silent about the node associated with a first boot image prior to the reset and associated with a second boot image from the reset, the first and second boot image differing in at least one of the following characteristics: operating system; system configuration and distributed application parameters.

Marsh teaches the node associated with a first boot image prior to the reset and associated with a second boot image from the reset, the first and second boot image differing in at least one of the following characteristics: operating system; system configuration and distributed application parameters (see column 2, line 57 – column 3, line 48, column 6, line 15 – column 8, line 13, column 8, line 39 – column 10, line 30, see figures 2-4, 6).

Thus, it would have been recognized by one of ordinary skill in the art that applying the known technique of configuring the network system based on the policy taught by Lortz and modifying the boot image or reconfiguring the boot image as taught by Marsh into the network node or network devices of Brownell would have yielded predicable results and resulted in an improved network system, namely, a improved network cluster system that would positively and efficiently updating the configuration of network system devices based on policy in network cluster system of Brownell to efficiently managing and distributing the network policies in all network cluster system devices and efficiently configures

the network cluster system devices or computers by transmitting configuration data from the policy files or database or policy server.

As per claim 13, Brownell discloses determining that one of the plurality of nodes failed [failure is being detected, before hand, based on the heartbeat messaging mechanism], the failed node executing at least a portion of the selected distributed application (see column 2, line 47- column 3, line 26, column 6, lines 18-35, column 9, line 54 – column 10,line 28); and wherein selecting one of the plurality of nodes comprises selecting one of the remaining nodes in response to the failure (see column 2, line 47- column 3, line 26, column 6, lines 18-35, column 9, line 54 – column 10,line 28).

As per claim 14, Brownell discloses the same processor architecture (column 5, lines 29-34).

As per claim 15, Brownell discloses selecting one of the plurality of nodes at a predetermined time column 27, lines 30-32).

As per claims 16-30 and 31-45, claims 16-30 and 31-45 are computer readable media claims and system claims of method claims 1-15. They do not teach or further definer over the limitation as recited in claims 1-15. Therefore, claims 16-45 are rejected under same scope as discussed in claims 1-15, supra.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Network Policy Distribution by Lortz et al. US Patent Number7, 428,583.

b. Network Distributed system for Updating Locally Secured Objects in Client Machines by Bahr US Patent Number 6,029,246.

c. Merging Scalable Nodes into Single-Partition Merged System Using Service Processors of Nodes by Zaharias US Patent Number 7,379,983 B2.

d. Mechanism for Controlling Boot Decisions from a Network Policy Directory Based on Client Profile Information by Backman et al. US Patent Number 7,127,597 B2.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SAKET K. DAFTUAR whose telephone number is (571)272-8363. The examiner can normally be reached on 7:00 - 3:30 pm M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on 571-272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. K. D./
Examiner, Art Unit 2451

/KAMAL B DIVECHA/
Primary Examiner, Art Unit 2451